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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,215	11/25/2003	Bhamidipaty K.D.P. Rao	00014DIV(3600-267-02)	5519

7590 05/25/2005

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EXAMINER

JENKINS, DANIEL J

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/721,215

Applicant(s)

RAO ET AL.

Examiner

Daniel J. Jenkins

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 2 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. The Examiner has carefully considered Applicant's Response of 2/9/05. The Examiner agrees with Applicant's discussion of claim 9, and finds that claim 9 should be objected to along with claim 2 as containing allowable subject matter. However, the Examiner disagrees with Applicant's position that Reichert et al. fails to disclose nitriding before deoxidation. In particular, Reichert et al. teaches that nitriding, when performed, is performed during the reduction step (which is not precluded by Applicant's claims), and is followed by deoxidation. The Examiner notes that the nitriding is not performed during the phosphorous doping, but with the reduction step.

2. Claims 1, 3 and 5-8 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. '779 (Reichert et al.).

Reichert et al. disclose the invention substantially as claimed.

Reichert et al. disclose a method of forming a nitrided valve metal comprising:

- providing a tantalum powder (col. 3, lines 15-22);
- doping the tantalum powder with materials selected from a group comprising nitrogen (col. 3, lines 60-65);
- deoxidizing the doped tantalum powder (col. 4, lines 26-54); and
- sintering at 1500-1300°C to form a sintered tantalum anode (col. 5, lines 7-14).

Reichert et al. further disclose wherein the doping step can be performed with material selected from a group that nitrides the tantalum powder, including nitrogen gas, but provides no specific example of where nitriding precedes deoxidation, thus this is an obvious rejection and not an anticipation.

Reichert et al. further disclose wherein the nitrogen content of the nitrided metal is 100 to 15,000 ppm (col. 3, lines 53-55).

The approximation of the sintering temperature establishing a prima facie case of obviousness, one of ordinary skill in the art selecting a sintering range based on the valve metal including alloy additions of the initial starting materials.

Reichert et al. discloses tantalum powder, but it is known in the art that niobium powder is a valve metal equivalent in the formation of electrodes.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. '779 (Reichert et al.).

Reichert et al. disclose the invention substantially as claimed (see paragraph 3 above).

However, Reichert et al. do not teach doping after sintering, but it is common knowledge in the prior art to dope valve metals before or after sintering in the same field of endeavor in order allow for reaction products to escape during the sintering step.

It would have been obvious to one having ordinary skill in the art at the time of the invention to dope after sintering in order to allow reaction products to escape during the sintering step and to permit a more complete doping step.

4. Claims 2 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner finding that the prior art does not teach or make obvious the nitriding taking place at the claimed temperature, the reference to Reichert et al. not being able to be modified since the doping of the additional agents required in Reichert et al. take place at a higher temperature during the ignition/reduction step.


5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Jenkins whose telephone number is 571-272-1242. The examiner can normally be reached on M-TH6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1242. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Jenkins  
Primary Examiner  
Art Unit 1742

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